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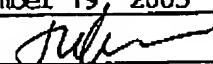
PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)

1125/206

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on September 19, 2005

Signature 

Typed or printed name JULIE NGUYEN

Application Number

10/643,759

Filed

August 18, 2003

First Named Inventor

Barnoski, et al.

Art Unit

2839

Examiner

Nasri, Javaid H.

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

 applicant/inventor. assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96) attorney or agent of record.
Registration number 32,822 attorney or agent acting under 37 CFR 1.34.
Registration number if acting under 37 CFR 1.34 _____

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September 19, 2005

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.
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PATENT
Docket No.: 1125/206

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In the application of:

Barnoski, et al.

Serial No.: 10/643,759

Filing Date: August 18, 2003

For: HIGH PRECISION OPTOELECTRONIC
COMPONENTS

Examiner: Nasri, Javad H.

Group Art Unit: 2839

SEP 19 2005

EXPEDITED PROCEDURE

**ARGUMENTS IN SUPPORT OF
PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Dear Sir:

In connection with the Notice of Appeal to the Board of Patent Appeals and Interferences from the Final Office Action dated May 19, 2005, and the Pre-Appeal Brief Request for Review concurrently filed herewith, Applicant hereby submits arguments in support of such Request.

ARGUMENTS

A. Non-entry of amendment after final

In an earlier response dated July 19, 2005 to the Final Office Action, Applicant amended claims 96 and 104 and canceled claim 105. Claims 1-95 were previously canceled. However, in an Advisory Action, the Examiner did not enter the claim amendments after final, because they raised new issues that would require further consideration. Claims 96-145 therefore remain pending in this application.

Applicant respectfully disagrees with the basis for not entering the earlier claim amendment. For claim 1, the earlier amendment removed the term "for" in the preamble, to positively recite that the optical coupling supports an optical fiber. Applicant submits that the scope of the amended claim should have already been searched and considered in connection with other claims pending in the case, such as claim 143, which positively recite an optical fiber supported by the coupling.

Further, claim 1 recites "the optical fiber supported by the ferrule" in the last phrase of the claim. The proposed amendment to claim 1 would not have raised new issues.

For claim 104, Applicant amended the claim to essentially include the limitations of claim 105, and canceled claim 105 as a result. The proposed amendment to claim 104 would not have raised new issues.

Accordingly, Applicant respectfully request that the earlier amendment after final be entered for further prosecution.

B. Prior art rejections

Applicant set forth detail arguments in the earlier responses concerning the references cited and applied to the claims. Applicant will only summarize the arguments herein, and emphasize the deficiencies of the cited references in response to the Examiner's comments in the Advisory Action.

1. The Invention

In examining the present application, the Examiner should keep in mind the context in which the claimed optical coupling of the present invention is structured for use in optoelectronic applications, as emphasized in the earlier responses. Until the creation of the present invention, none of the prior art optoelectronic components has been successfully manufactured by means of stamping processes to achieve the desired tolerances, and which can be easily deployed in the field by a user. The failure of the prior art to achieve such tolerance is due to not only the absence of a viable high tolerance stamping system and process, but also the failure of viable component structures that can be manufactured by stamping systems and processes, and that can be easily deployed by a user in the field. The present invention is directed to optoelectronic components (e.g., assemblies and sub-assemblies), in particular an optical coupling having structures that lend themselves to be manufactured by high-speed stamping systems and processes, such as the novel stamping system and process disclosed in Applicant's co-pending U.S. patent application no. 10/620,851, which is capable of stamping optoelectronic components having tolerances of 1,000 nm or less, required by many optoelectronic applications. The inventive optoelectronic components include optical fiber connectors, including precision ferrules in association with alignment sleeves. Either or both ferrules and sleeves may be stamped from metal. The results achieved by the invention are new, unexpected, superior, critical, and unsuggested by any prior art.

2. Obviousness Rejection Based on Ochiai and Lessar

Ochiai does not teach ferrules formed by a stamping process. Ochiai also does not teach ferrule halves received by a sleeve. The disclosure of Ochiai and the distinctions of the present invention had been discussed in detail in the prior response. A reasonable reading of Ochiai leads to the conclusion that it does not disclose a metal ferrule that comprises two ferrule halves. Instead Ochiai refers to silicon based optical link modules. There is teaching in Ochiai to replace the silicon substrates 45 and 46 with metal substrates. In fact, Ochiai expressly and by implication teaches away from metal substrates because the substrates 45 and 46 are supposed to support metal connectors 49a-c, as shown in Fig. 21.

Lessar does not make up for the deficiencies of Ochiai. Lessar does not disclose ferrules that support optical fibers, which are formed by a stamping process, and further ferrules halves formed by stamping. Instead, Lessar tangentially referred to stamping of a flat circular ferrule 20 to hold a lens 30. It does not appear that the lens holding ferrule is intended to be manufactured to have the kind of tolerance required for optical fiber couplings as in the present invention, regardless of the specific manufacturing process. This point is particularly clear based on the fact the ferrule 20 is designed with a stress relief structure, and in particular a U-shaped strain relief channel 22 along the perimeter of the ferrule body. With such U-shaped channel structure, the ferrule 20 can "give" to some extent to reduce residual stress against the surrounding structure. (See, e.g., col. 5, lines 52-63.) This is the specific intent of the invention disclosed in Lessar. (See, e.g., col. 2, lines 47-61.) However, for optical coupling of optical fibers, such strain relief in the supporting ferrule would create unacceptable tolerances, resulting in misalignment of the fibers. Such concerns would outweigh any economical advantage associated with stamping process manufacturing in general. It is therefore abundantly clear that Lessar does not teach using stamping process to form extremely high tolerance optical couplings for optical fibers.

A person skilled in the art would not have specifically look to Lessar for guidance in the manufacturing of optical coupling for fibers. And even if one were to refer to Lessar in hope of such guidance, Lessar simply does not contain an enabling disclosure of forming using a stamping process optical fiber supporting ferrules in an optical coupling. Contrary to the Examiner's contention in the Advisory Action, while stamping is broadly claimed, stamping of optical fiber supporting ferrules would not be suggested by Lessar for the reasons noted above and in Applicant's earlier responses.

Given the foregoing, even if Ochiai and Lessar can somehow be combined, such combination would not result in an enabling disclosure of an optical coupling comprising ferrules

formed by a stamping process, as required by the independent claims in the present application. Even if the references can somehow be combined, it would be necessary to make modifications, not taught in the prior art, in order to combine the documents to obtain the claimed invention of optical coupling including stamped ferrules supporting optical fiber.

Further, Applicant respectfully submits that Ochiai and Lessar should not have been combined in the first place to render the claimed invention obvious, since such combination would not have been obvious to a person skilled in the art. Ochiai is directed to an optical link module for the specific purpose of terminating a fiber link and converting optical and electrical signals. Lessar on the other hand is directed to the structure of an optical window for implantable medical devices. It is clear that neither Ochiai nor Lessar contain any suggestion (express or implied) that they be combined, or that they be combined in any specific manner to obtain the claimed invention. Each reference is complete and functional in itself for the specific purpose disclosed in the respective reference, so there would be no reason to use teachings from, or add or substitute teachings to any other document. Neither Ochiai nor Lessar includes any hint or suggestion to refer to the other reference for guidance on modifications. There is therefore no teaching or suggestion (expressed or implied), taking into account only knowledge which was with the level of ordinary skill at the time the invention was made, if and how Ochiai could be modified with Lessar, while maintaining the type of ferrule that Ochiai proposes for its optical link module connection system. Such modification is only possible with impermissible hindsight reconstructions, made possible only by the disclosure of the present invention.

Further, Ochiai and Lessar take mutually exclusive paths and reach different solutions to different problems that the respective references address. Ochiai requires alignment of optical fibers to an optical link module, using coupling or guide pins to position two components with tight tolerance. Lessar on the other hand requires strain relief to reduce residual stress in the lens mount, which effectively results in a structure with a relatively lower tolerance. Consequently, they effectively teach away from each other (expressly or by implication). Therefore it would not be logical to combine them.

Still further, because Lessar is from a very different technical field than that of the present invention, and that of Ochiai, Lessar would be deemed to be "non-analogous art".

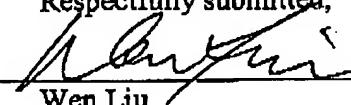
In examining the present application, the Examiner should keep in mind the context of high tolerance parts required for aligning optical fibers, as achieved by the present invention. The

present invention provides an enabling solution to a long felt need, achieving advantages beyond what the prior art has to offer. The accomplishments of the inventors of the present invention involve no small steps. (However, even if the steps taken by the inventors are deemed to be small, the invention is classified in a crowded art; therefore even if a "small" step forward should be regarded as significant.) If the present invention were in fact obvious, because of its advantages, those skilled in the art surely would have implemented it by now. That is, the fact that those skilled in the art have not implemented the invention, despite its great advantages, indicates that the combination suggested in the Office Action would not have been obvious.

3. Rejection based on Karlovich

In the Final Office Action, the Examiner commented that the language "for supporting an optical fiber" recites intended use. Applicant proposed to amend independent claim 96 to remove the term "for" in the preamble, thus making the support of optical fiber part of the limitation recited in the preamble. Karlovich is not related to the support of optical fiber. The Examiner also commented that the language in claim 104 does not specify that the two ferrule halves are separate parts. Applicant amended the language to recite that the two ferrule halves are initially brought together and maintained in a mating relationship by a sleeve. This makes clear that the two ferrule halves have separate structures that initially come together in a cooperative fashion to hold the optical fiber (the two halves may be interconnected, as recited in further dependent claims 115 and 116). This contrasts from the structure in Karlovich, which is instead directed to a ferrule having a preset tubular structure, in which there are no two parts, whether interconnected or not, that initially come together and maintained together by a sleeve.

Respectfully submitted,


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